CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. 88 - 041

SITE CLEANUP REQUIREMENTS FOR:

MOTOROLA COMPUTER SYSTEMS INC.
and TANDEM COMPUTERS INC.
19333 VALLCO PARKWAY
CUPERTINO, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Motorola Computer Systems, Inc. (formerly Four-Phase Systems) leased the property from Vallco Park, Ltd. at 19333 Vallco Parkway in Cupertino from 1974 to 1978. Motorola vacated the facility in 1978 and it was subsequently leased to Tandem Computers Inc., the present occupant and owner of the property. Motorola and Tandem Computers are considered dischargers; however, Tandem Computers will have responsibilities for compliance with this Order only in the event that Motorola fails to comply with the provisions of the Order.

2. While occupying the site, Motorola utilized a subsurface storage system to contain solvents and waste byproducts from their semiconductor production processes. The storage system consisted of:

   a. Two non-vaulted solvent storage tanks each with an approximate capacity of 1870 gallons, and

   b. Two acid neutralization sumps each with an approximate capacity of 900 gallons.

   It is the intent of this Order that Motorola's responsibilities are limited to activities related to the releases which have occurred froom these subsurface units.

3. In response to the Board's Underground Leak Detection Program Questionnaire, the tanks, sumps and approximately ten cubic yards of associated soil were removed in December 1982 and a subsurface investigation was initiated. Chemical analyses of soil samples taken at a depth of seven feet below ground surface (b.g.s) immediately beneath the excavated area revealed up to 130,000 ug/kg trichloroethene (TCE), 34,000 ug/kg xylenes, 8,600 ug/kg ethylbenzene, 850 ug/kg Freon 113, 760 ug/kg 1,2 dichloroethene, 140 ug/kg toluene and lower concentrations of other pollutants. A groundwater monitoring well was installed to a depth of 75 feet below ground surface but no water was encountered at this depth. In late 1983 the excavation created by the removal of tanks and sumps was backfilled and the surface was sealed with asphalt pavement to minimize water infiltration above the polluted zone.

8. After two and one-half years of operating the vacuum extraction system, Motorola estimates that approximately 74 pounds of TCE have been removed. Initially, the vacuum extraction system extracted about 0.13 pounds of TCE each day. Currently, the system daily removes less than 0.000003 pounds of TCE. Motorola estimates that between 1 to 10 pounds of TCE remain in the soil at an average concentration of 340 ppb in an area of approximately 2500 square feet. Motorola recommends ceasing operation of the soil gas extraction system for the following reasons:

   1). The low levels of pollutants remaining in the soil.

   2). The maximum depth of polluted soil (61 feet below ground surface) versus the depth to perched water zones (90 feet) and the first aquifer zone (180 feet) indicates that there is little potential for beneficial uses of groundwaters to be affected in the future at the site.

   3). The risk to public health and the environment is minimal because the site is paved, concentrations of TCE in the soil are relatively low (several hundred ppb), and the concentrations of pollutants in the groundwater are extremely low (9.3 ppb Freon 113, 1 ppb TCE and 1 ppb toluene were detected in the perched zones and 2 ppb toluene was detected in the aquifer).

   4). The current ineffectiveness of the vapor extraction system. At the present rate of removal, it would be several thousand years before all pollutants would be removed from the subsurface.

   5). The residual pollutants will most likely be removed via natural biodegradation.

9. Based on current information, continued operation of the vacuum extraction system is unnecessary and cleanup appears complete given the current rates of removal and the technical infeasability of modifying removal rates or instituting other soil cleanup methods for the relatively low concentrations of volatile organic chemicals remaining in deep soils. Verification that cleanup is complete can be achieved with a groundwater monitoring program.

10. Motorola Computer Systems, Inc. (hereinafter referred to as a discharger) has conducted the site investigation and clean up and is expected to continue all activities related to the release of chemicals from the non-vaulted tanks and sumps. Tandem Computers, Inc. (hereinafter referred to as a discharger) reportedly never used the non-vaulted tanks and sumps and is considered a discharger because they own the property.

11. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The

Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and contiguous surface and groundwaters.

12. The existing and potential beneficial uses of the groundwater underlying and adjacent to the facility include:

    a. Industrial process water supply
    b. Industrial service water supply
    c. Municipal and Domestic water supply
    d. Agricultural water supply

13. The dischargers have caused or permitted, and threaten to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.

14. This action is an order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

15. The effectiveness of protecting water quality by the soil cleanup achieved by the vacuum extraction system needs to be evaluated by a program of groundwater monitoring from three existing monitoring wells. The need for any possible additional cleanup can be assessed based on the results of the monitoring program.

16. The Board has notified the dischargers and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

17. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. The storage, handling, treatment or disposal of soil or groundwater containing pollutants shall not create a nuisance as defined in Section 13050(m) of the California Water Code.

2. Motorola shall conduct monitoring activities as needed to define the current local hydrogeologic conditions, and the extent of soil and groundwater pollution as set out in this Order. Should monitoring results show evidence of pollutant migration, additional characterization of pollutant extent may be required. If the Executive Officer determines and notifys Tandem Computers that Motorola has failed to comply with this paragraph, Tandem Computers, as current occupant and landowner, shall comply with this Specification within ninety days.

C. PROVISIONS

1. Motorola shall submit to the Board acceptable monitoring program reports containing results of work performed according to the attached self-monitoring program prescribed by the Board's Executive Officer. If the Executive Officer determines and notifys Tandem Computers that Motorola has failed to comply with this paragraph, Tandem Computers, as current occupant and landowner, shall comply with this Specification within ninety days.

2. Motorola shall comply with Prohibitions A.1., A.2., and A.3., and Specifications B.1. and B.2. above, in accordance with the time schedule and tasks below. If the Executive Officer determines and notifys Tandem Computers that Motorola has failed to comply with this paragraph, Tandem Computers, as current occupant and landowner, shall comply with this Provision within ninety days.

COMPLETION DATE/TASK:

a. VACUUM EXTRACTION SYSTEM

1) COMPLETION DATE: April 7, 1988

TASK: Submit a technical report acceptable to the Executive Officer containing a proposal to cease operation of the vacuum extraction system. Propose to properly destroy any unnecessary monitoring units. List existing monitoring units.

2) COMPLETION DATE: May 23, 1988

TASK: Submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in Task C.2.a.1.

b. SAMPLING ON-SITE MONITORING WELLS

COMPLETION DATE: May 23, 1988

TASK: Submit a technical report acceptable to the Executive Officer containing sampling results from groundwater monitoring wells as summarized in Table 1 of the self-monitoring program and describing sampling procedures.

Sampling reports shall be submitted semiannually thereafter on November 16 and May 16 until November 16, 1992 at which time the monitoring schedule may be revised.

c. SUBMIT SUMMARY SAMPLING REPORT

COMPLETION DATE: November 16, 1992

TASK: Submit a technical report acceptable to the Executive Officer containing a technical report which includes a summary of all sampling results including sampling dates, analytical methods and copies of all laboratory reports.

This report shall also include an evaluation of whether additional remedial measures are necessary and whether a reduced monitoring program is appropriate. Recommend any additional measures for final cleanup and a monitoring program for the next five years. This recommendation will be reviewed by Regional Board staff and the Regional Board will determine if the recommended plan is acceptable.

3. If the dischargers are delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the dischargers shall promptly notify the Executive Officer and the Board may consider revision to this Order.

4. The dischargers shall identify any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles. In the event of non-compliance with Provision C.2. or any other Specification or Provision of this Order, written notification which clarifies the reasons for non-compliance

and which proposes specific measures and a schedule to achieve compliance shall be submitted. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order.

5. Semiannual reports submitted in November shall include, but need not be limited to, updated groundwater elevation and flow direction maps from nearby wells monitored by the Santa Clara Valley Water District and on-site well OW-2. The locations of these wells is indicated in Figure 1. These reports shall also include tables containing water level measurements from these wells and well construction information, e.g., screened intervals.

6. All hydrogeological plans, specifications, reports, and documents shall be signed by or stamped with the seal of a registered geologist, engineering geologist or professional engineer.

7. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

8. The dischargers shall maintain in good working order, and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

9. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies:

    a. Santa Clara Valley Water District
    b. Santa Clara County Health Department
    c. City of Cupertino
    d. State Department of Health Services/TSCD

10. The Executive Officer may additionally require copies of correspondence, reports and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order to be provided to the U.S. Environmental Protection Agency, Region IX, and to a local repository for public use.

11. The dischargers shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:

    a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any

required records are kept, which are relevant to this Order.

b. Access to copy any records required to be kept under the terms and conditions of this Order.

c. Inspection of any monitoring equipment or methodology implemented in response to this Order.

d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.

12. The dischargers shall file a report on any changes in site occupancy and ownership associated with the facility described in this Order.

13. If any hazardous substance is discharged in or on any waters of the state, or discharged and deposited where it is, or probably will be discharged in or on any waters of the state, the discharger shall report such discharge to this Regional Board, at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m., and to the Office of Emergency Services at (800) 852-7550 during non-business hours. A written report shall be filed with the Regional Board within five (5) working days and shall contain information relative to: the nature of waste or pollutant, quantity involved, duration of incident, cause of spill, Spill Prevention, Control, and Countermeasure Plan (SPCC) in effect, if any, estimated size of affected area, nature of effects, corrective measures that have been taken or planned, and a schedule of these activities, and persons/agencies notified.

14. The Board will review this Order periodically and may revise the requirements when necessary.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 16, 1988.

Lawrence P. Kolb
for

Roger B. James
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

Motorola Computer Systems, Inc. and Tandem Computers
Cupertino, Santa Clara County

SITE CLEANUP REQUIREMENTS ORDER NO. 88 - 041

CONSISTS OF

PART A, Dec. 1986
As Modified by South Bay Toxics Division, 1/23/87
With Appendices A-E

and

PART B, adopted March 16, 1988

PART B

I. DESCRIPTION OF SAMPLING STATIONS

GROUNDWATER

Station	Description
Well OW-2	Confined aquifer well
CB-1 and CB-4	Perched-zone wells

II. MISCELLANEOUS REPORTING. None.

III. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given in Table 1 (attached).

IV. MODIFICATIONS TO PART A.

A. Delete Sections D, E, F.2, F.3, G.2, G.4.b, G.4.e, and G.4.g.

B. The first paragraph of Section G.4 shall be changed to read as follows:

> Written reports shall be filed with the Regional Board semiannually on May 16 and November 16 until November 16, 1992 at which time the monitoring schedule may be revised. The reports shall be comprised of the following:

C. Insert G.4.d.5) to read as follows:

> The EPA Method 624 analyses shall include tentative identification and semi-quantified concentrations of non-priority pollutant substances of greatest apparent concentration, to be followed by identification and confirmation of peaks of greatest apparent concentration.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with Site Cleanup Requirements established in Regional Board Order No. 88 - 041.

2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer or the Regional Board.

March 28, 1988
DATE

ROGER B. JAMES
Executive Officer

Attachments: Table I

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

SAMPLING STATIONS	Confined Aquifer well OW-2 and Perched-zone wells CB-1 and CB-4
TYPE OF SAMPLE	Grab
EPA Methods 8010/8020 for purgeable priority pollutants including Freon 113 and xylenes	Semiannually
EPA Method 8240 and non-priority pollutant scan and EPA Method 8060 for phthalates *	Biennially
water levels	Semiannually

* The first set of sample results using these methods will be submitted in May 1988. EPA Method 8010/8020 analyses are unnecessary when analyzing samples using EPA Methods 8240/8060.